APPENDIX I
GLOSSARY OF TERMS

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(Number in parentheses is reference which is source of definition)

Abandoned Well: A well is considered to be abandoned if its use has been permanently discontinued; its pumping equipment has been permanently removed; the well is in such a state of disrepair that it cannot be used to supply water, and/or has the potential for transmitting surface contaminants into the aquifer; the well poses potential health or safety hazards or the well is in such a condition that cannot be placed in the active, standby or inactive status.

Active Well: A well is considered to be active if it is an operating well used to supply water.

Annular Space: The space between the drill hole and the well casing.

Aquifer: A formation, group of formations, or a part of a formation that contains sufficient saturated material to yield significant quantities of water to wells. (5)

Aquifer Test: Aquifer or pumping tests are made in water wells to obtain information about the performance and efficiency of the well being pumped, and/or to obtain data from which the hydraulic characteristics of the aquifer can be calculated. The test made to determine hydraulic characteristics of an aquifer is usually referred to as "aquifer test."

Artesian (Confined Ground Water): When the water level rises above the top of the aquifer which the well taps, the aquifer is assumed to be "artesian." An artesian well flows only when the water level is above land surface. (5)

Assistant Secretary: The Assistant Secretary of the Department of Transportation and Development, Office of Public Works, or his designee.

Bacteriological Analysis: This analysis, usually for drinking water, consists of a laboratory report indicating the presence or absence of coliform bacteria in a given water sample, as determined by laboratory procedure.

Bentonite Slurry: A mixture of bentonite and water, weighing not less than nine (9) pounds per gallon.

Casing: A tubular retaining structure, generally metal or PVC, which is installed in a drilled, bored, driven, or augered hole to maintain the well opening.

Cement-Bentonite Slurry: A mixture of cement, bentonite and water, consisting of not more than eight percent bentonite by dry weight of cement and a maximum of ten gallons of water per sack (94 pounds) of cement. Additives, in the approved and proper ratio, may be added to the slurry if required.

Chemical Analysis: A chemical analysis is usually a report of dissolved minerals in the water and the water's physical properties, such as temperature and color. The minimum chemical properties that are usually determined are hardness, specific conductance, hydrogen-ion concentration (pH), dissolved solids, chloride, bicarbonate, iron, fluoride and nitrate.

Coarse Ground Bentonite: A processed bentonite used to seal well casings and to plug holes. Coarse ground bentonite is placed by pouring from surface or pumping from the bottom to surface. An approved inorganic polymer may be used to retard swelling of the bentonite.

Community Public Supply Water Well: A public supply well which serves at least fifteen service connections used by year-round residents or regularly serves at least twenty-five year-round residents. A community public supply well may be owned by a municipality or community, a water district, a corporation, a private individual or by a local, state or federal governmental agency.

Contaminant: Any undesirable physical, chemical, biological, or radiological substance or matter in water. (6)

Contamination: Any introduction into water of microorganisms, chemicals, wastes, or waste-water in a concentration that makes the water unfit for its intended use. (4)

Contractor: The word "contractor" in these regulations is used to refer to any person, firm or corporation who is licensed to engage in the business of drilling, reworking or installing water wells, monitoring wells, heat pump wells or holes, geotechnical boreholes, and/or plugging and abandoning wells or holes, excluding oil and gas wells.

Department: The Louisiana Department of Transportation and Development, Office of Public Works.

Dewatering Well: A water well installed to dewater an aquifer or lower a water table in order to allow construction or mining activities.

Disinfection: The killing of a large proportion of microorganisms in or on a substance with the probability that all pathogenic microorganism will be killed.

Ditch: A man-made excavation dug to convey surface water for drainage purposes or irrigation.

Director or a Board: See **Assistant Secretary.**

Domestic Well: A water well used exclusively to supply the household needs of the owner/lessee and his family. Uses may include drinking, cooking, washing, sanitary purposes, lawn and garden watering and caring for pets.

Drawdown: The difference, usually in feet, between the static (non-pumping) water level and the pumping level in a well after the well has been pumped for a specified period of time.

Drill Cuttings: Samples of the material obtained during drillings and are the source of lithologic information needed for proper selection of screen openings. A principal objective of drilling test holes is to obtain samples. (1)

Driller: See **Contractor.**

Drilling: The word "drilling" in these regulations is used to refer to the drilling, boring, coring, driving or augering of a well or hole.

Drilling Contractor: See **Contractor.**

Driller's Log: A driller's log is the driller's description of the geologic strata encountered, their thickness and depth. (1)

Drilling Mud: A fluid composed of water and clay (either native clay or a combination of native and commercial clays) used in drilling operations to remove cuttings from the hole, to clean and cool the bit, to reduce friction between the drill stem and the sides of the hole, to seal the sides of the hole, to prevent caving, bridging or loss of circulation, and to prevent the interchange of water between aquifers. When permitted, drilling mud may be used as filler or plugging material, provided it weighs not less than nine (9) pounds per gallon.

Electrical Log: A record of the resistivities of the subsurface formations and the contained fluid and spontaneous potentials generated in the borehole, both plotted in terms of depth below some datum, such as land surface. Similar logs commonly made in boreholes are the induction logs. Other borehole geophysical logs that also may be available are the gamma ray, caliper and neutron logs.

Flood Prone Area: An area subject to a 100 year flood level as established by the administering agency for the Federal Flood Insurance Program.

Free Flowing Water Well: An artesian well which is allowed to flow, under natural conditions, at or above the ground surface.

Geopressured Aquifer: A term used for an aquifer, especially in the Gulf Coast Area, in which the fluid pressure exceeds the normal hydrostatic pressure of 0.465 pounds per square inch per foot of depth. (2)

Geotechnical Borehole: An exploratory borehole drilled, augered, bored or cored to obtain soil samples to be analyzed for chemical and/or physical properties.

Geothermal: Pertaining to the internal heat of the earth.

Gravel-Packed Well: A well in which properly graded gravel or coarse sand is hydraulically placed in the area immediately surrounding the screen or slotted pipe used as a screen to increase the effective diameter of the well, to stabilize the aquifer and to prevent sand from entering the well.

Ground Water: Water percolating below the earth's surface.

Health Hazard: Any condition that may create a danger to public health and well being.

Heat Pump Hole: A hole drilled to install piping for an earth-coupled water source heat pump system, also known as a vertical closed-loop system.

Heat Pump Supply Well: A water well which supplies ground water to a heat pump heat exchanger.

Industrial Well: A well used to supply water for plants that manufacture, process or fabricate a product. The water may or may not be incorporated into the product being manufactured. The water is usually used to cool machinery, to provide sanitary facilities for employees, to air condition the plant, and water grounds at the plant. Water used for mining or processing ore, such as gravel, is included in the industrial category.

Inactive Well: A well is considered to be inactive if it is not presently operating but is maintained in such a way that it can be put back in operation with a minimum of effort to supply water.

Irrigation/Agricultural Well: A well used for irrigating cultivated plants, for watering stock, for crawfish and catfish farming, and for similar agricultural activities. Most irrigation wells supply water for farm crops, but this category also includes wells that are used for watering parks, golf courses, cemeteries and wells which are used exclusively for watering lawns in urban areas.

Lessee: See **Owner**.

Monitoring Well: A well used to obtain hydrologic and water quality data, usually installed at or near a known or potential source of ground water contamination.

Neat Cement: A mixture of cement and water, consisting of not more than five (5) gallons of water per sack (94 pounds) of cement.

Noncommunity Public Supply Well: A public supply water well which serves either fewer than fifteen service connections or fewer than twenty-five year-round residents or no year-round residents. Examples of the former case are small public water supplies for mobile home parks, subdivisions, etc. which fall below the 15 connections/25 persons criteria for community water supplies. The latter case includes public water supplies which serve no year-round residents, such as bars and lounges, motels, camps, office buildings, restaurants, rest stops, service stations, recreational facilities, schools, commercial establishments, etc.

Observation Well: A well used by the owner, by governmental agencies, or by an appropriate engineering or research organization to obtain information on the water resources of an area.

Owner: Individual, corporation, association, partnership, institution or governmental agency who is either the legal owner of the property on which the well or hole is located or is holding a long-term lease on the property.

Permeability: A measure of the relative ease with which porous media can transmit a liquid under a potential gradient. Sands have a higher permeability than clays.

Pilot Hole: A hole drilled with the intent to install casing and to produce water. It is usually of a smaller diameter than the proposed well and has to be reamed to a larger diameter for the installation of casing and screen.

Private Well: See **Domestic Well.**

Plumbness: The variation with depth of the center line of the well from a vertical line drawn through the center of the well at the top of the casing. (3)

Pollution: A condition created by harmful or objectionable material in water. (4)

Potable Water: Water whose bacteriological, physical and chemical properties make it suitable for human consumption.

Power Generation Well: A well used to supply water for generation of any type of power.

Public Supply Water Well: A well which provides water for drinking, cooking or washing use by the public, or transients, or by persons other than the immediate family of the owner of the supply. A public supply water well may be either a community water well or a noncommunity water well.

Pump-Down Method: A positive displacement method for placing grout or slurry material by pumping or forced injection by air pressure.

Pumping Test: See **Aquifer Test.**

Pumping Water Level: The water level in a well which is being pumped, usually expressed in feet above or below a specific datum, such as land surface.

PVC Well Casing: A polyvinyl chloride plastic pipe conforming to current AWWA Standard A-100 and/or ASTM F-480 Standard for water well casing.

Registered Permit Plat: A Land Surveyor's plat showing Section, Township, Range, and the distances from the section lines to the location of the well (oil, gas, injection, etc). The permit plat is submitted to the Office of Conservation with the oil or gas well permit application.

Registered Well: An inventoried well that has been assigned an identification number by the Department and whose records are available.

Reworking Water Well: Rehabilitation or modification of a water well to increase its efficiency, restore its capacity, and/or improve its water quality. Methods of reworking water wells include removing and replacing the screen, regravel packing the screen, placing a new screen within the old screen, placing a liner pipe within the old casing or redeveloping a well by surging, acidizing, jetting, etc.

Rig-Supply Well: A water well drilled at an oil or gas drilling site to supply water for drilling and/or other oil field related activities.

Saline Water: Water with a dissolved solids content of 1,000 milligrams per liter (parts per million) or more.

Sanitary Seal: A suitable threaded, flanged, or welded water-tight cap or compression seal installed at the top of the well casing so as to prevent the entrance of contaminated water or other objectionable material into the well.

Sanitary Sewer: An underground conduit that conveys domestic, commercial or industrial sewage.

Screen: A structural tubular retainer, usually metal or PVC, used to support the hole in unconsolidated material with openings which are selected on the basis of adopted standards, and which allows sand free water to flow freely into the well in ample quantities and with a minimum loss of head. In agricultural wells, slotted pipe is sometimes used as a screen.

Seepage: The slow movement of water and/or other fluids through the soil into the sub-surface.

Septic Tank: An underground water-tight tank which receives sewage.

Specific Capacity: The rate of discharge of water from a well divided by the drawdown of water level within the well for a specified period of continuous pumping of the well. It is usually expressed as "gallons per minute per foot of drawdown after (specified) hours of continuous pumping".

Standby Well: A well is considered to be standby if it is used in emergencies or occasionally used to supply water.

Static Water Level: Static water level is the non-pumping water level in a well that has not been in operation for a period of time and is usually expressed in feet above or below a specified datum, such as land surface.

Stream: A natural channel or water course which conveys surface and subsurface runoff.

Storm Sewer: An underground conduit used for conveying surface water.

Subsidence: A local mass movement that involves principally the downward settling or sinking of the earth's surface with little or no horizontal motion. (2)

Subsurface Absorption Fields: An underground area containing a bedding of aggregate with distribution lines to permit disposal of septic tank effluent.

Test Hole: An exploratory borehole drilled to obtain geologic, hydrologic and water quality data.

Test Well: See **Test Hole.**

Underground Injection: The subsurface implacement of fluids by well injection. (6)

Underground Water: See **Ground Water.**

Uniformity Coefficient: The uniformity coefficient is the number expressing the ratio of the 40 percent size of the material to its 90 percent size. Size refers to the percentage by weight retained on a given sieve.

Vent (Breather Pipe): A screened outlet at the upper end of the well casing to allow equalization of air pressure in the well and the escape of gases.

Water Well Contractor: See **Contractor.**

Well Cap: A removable, usually water-tight device used to cover an opening into the well casing and is threaded, bolted or otherwise attached to the casing to prevent easy entry by other than the owner and to prevent the entrance of any contaminant or other objectionable material into the well.

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